Appln. No.: 09/672,450
Amendment dated May 13, 2004
Reply to Office Action of February 13, 2004

REMARKS/ARGUMENTS

The final office action of February 13, 2004 has been carefully reviewed and these remarks are responsive thereto. Reconsideration and allowance of the instant application are respectfully requested. Claims 1-27 remain in this application.

Applicants have amended claims 1, 10 and 19 to clarify that the captured image is a "digital" image. Also, claims 1 and 10 have been amended to confirm that storing image segments occurs after processing the image segments. Finally, applicants have amended the claims to correct several typographical errors. Applicants submit that these amendments do not raise further issues as they merely clarify what was already being claimed. See e.g., claim 19. Accordingly, entry of these amendments are respectfully requested.

Claims 1, 10 and 19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. patent no. 6,389,417 to Shin et al. ("Shin"). Applicants respectfully traverse this rejection.

Claim 1 calls for, among other features, capturing a digital image; dividing the captured image into a plurality of image segments; performing image processing on each of the plurality of image segments; and storing each of the plurality of processed image segments. The action alleges that Shin discloses all the elements of claim 1. Specifically, to show capturing, dividing, performing and storing as recited in claim 1, the action points to Fig. 2 items 20 (receive database image), 22 (segment image), 24 (analyze characteristic of segmented region), and item 26 (store image/region characteristic), respectively.

Substantially different from the invention of claim 1, Shin is directed to a method and apparatus for searching a digital image using characteristics such as the color and texture of the digital image. According to the process described in Fig. 2 of Shin, a database image is received and segmented into homogeneous regions. Then, the characteristics of the segmented region are analyzed. Characteristics as stated in Shin include color, texture and shape. Col. 3, lines 28-30. Next, the characteristic data of the region or image are stored. Significantly, Shin does not teach or suggest storing each of the plurality of processed image segments as recited in claim 1. Indeed, Shin describes storing the characteristics for each image or region rather than each processed image segment. See e.g., col. 4, ll. 57-59; col. 5, lines 10-11. In addition, Shin lacks a teaching or suggestion of capturing a digital image and dividing the *captured* image into a

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plurality of image segments. For at least the foregoing reasons, claim 1 is patentably distinguishable from <u>Shin</u>.

Claims 10 and 19 are similar to claim 1 in the differentiating features, and for at least this reasons are patentably distinct from <u>Shin</u>.

Claims 1, 3-4, 10, 12-13, 19 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent no. 4,764,971 to <u>Sullivan</u>. Claims 2, 8-9, 11, 18, 20 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Sullivan</u> in view of U.S. patent no. 4,484,349 to <u>McCubbrey</u>. Claims 5-7, 14-16, 22 and 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Sullivan</u> in view of U.S. patent no. 5,140,647 to Ise et al. ("<u>Ise</u>"). Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over <u>Sullivan</u> and <u>Ise</u> as applied to claims 5-7, 14-14, 22 and 24-27 above, and further in view of <u>McCubbrey</u>.

Independent claim 19 calls for, among other features, a storage medium that stores each of the plurality of processed image segments. To show this feature, the action points to output device 22 (e.g. display) in Fig. 1 of <u>Sullivan</u> and contends that "Sullivan inherently requires a storage medium to store the processed image segments because the displaying apparatus would not be able to display the processed image segment without storing them first." Notwithstanding whether a storage medium is inherent to display an image, <u>Sullivan</u> neither teaches nor suggests a storage medium that stores each of the *processed image segments*. Indeed, according to <u>Sullivan</u>, at col. 7, lines 22-28.

> The digital image processor performs the image processing on the image, using the image segment information, and supplies the *processed image* to an output device 22, such as a CRT display or hard copy generator in the case that the image processing was performed to improve the appearance of the image.

(Emphasis supplied). Notably, the processor 20 supplies the image rather than the image segments to the output device. Hence, contrary to the action's assertion, <u>Sullivan</u> lacks a teaching or suggestion of a storage medium that stores each of the *processed image segments* as recited in independent claim 19. Similarly, claims 1 and 10 are patentably distinct from <u>Sullivan</u> for substantially the same reasons.

Also, independent claims 1, 10 and 19 respectively call for, capturing a *digital* image, causing a *digital* image device to capture a *digital* image, and an image sensor that captures a

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digital image. In contrast, <u>Sullivan</u> describes sampling an image with a scanning apparatus 10 (e.g. video camera) and converting the sampled to a digitized sampled image using an analog to digital converter 12. Thus, <u>Sullivan</u> merely discloses capturing an analog image rather than a *digital* image as recited in each of independent claims 1, 10 and 19. For this additional reason, <u>Sullivan</u> neither teaches nor suggests all the elements of any claim in the instant application.

Neither <u>McCubbrey</u> nor <u>Ise</u> which the action combines with <u>Sullivan</u> to reject certain claims, which depend from clams 1, 10 and 19 overcome the aforementioned deficiencies of <u>Sullivan</u>. Thus, claims 1-27 are patentably distinct over <u>Sullivan</u> alone, or in combination with <u>McCubbrey</u> or <u>Ise</u> for at least this reason, and further in view of the additional advantageous features recited therein.

For example, in rejecting claim 21 (and similarly claims 3 and 12), which recites that the storage medium stores each of the processed data segments as each of the processed data segments arrives at the storage medium, the action contends that output device 22 in Fig. 1 of <u>Sullivan</u> shows this feature. Applicants respectfully disagree. According to <u>Sullivan</u>, the image and not the image segments are supplied by the processor 20 to the output device. Also, claim 4 (and similarly claim 13) calls for the performing step being performed on a first image segment when the storing step is being performed on a second image segment. Yet, the processor 20 of <u>Sullivan</u> supplies the image and not image segments to the output device 22 and thus neither teaches nor suggests storing one processed image segment while another image segment is being processed.

The action combines <u>McCubbrey</u> with <u>Sullivan</u> to reject claims 2, 8-9, 11, 18, 20 and 23 alleging that it would have been obvious to perform pipelining as described in <u>McCubbrey</u> to minimize the time required for processing. Even assuming, but not admitting, that the combination would have resulted in the invention of the rejected claims, one skilled in the art would not have combined <u>Sullivan</u> and <u>McCubbrey</u>. Specifically, the methodology disclosed in <u>Sullivan</u> by its very nature is performed sequentially and would not have been performed using pipelining.

The action combines <u>Ise</u> with <u>Sullivan</u> to reject claims 5-7, 14-16, 22 and 24-27 and <u>Ise</u> with <u>Sullivan</u> and further <u>McCubbrey</u> to reject claim 17. Applicants submit that the action has

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failed to provide any incentive or motivation to combine Ise with Sullivan. Namely, the action
contends that it would have been obvious to combine Ise with Sullivan "to create image
segments that overlay one another". However, this statement appears to be nothing more than
impermissible hindsight as no reason, explanation or motivation has been provided as to why one
would have desired to create image segments that overlay one another in the Sullivan system.
Indeed, since Sullivan processes the image using image segment information, if image segments
overlap one another other, creating the image segments and processing the image would take
more time, which generally is undesirable. Accordingly, even assuming, but not admitting, that
the combination of Sullivan and Ise would have resulted in the claimed invention, one skilled in
the art would not have been motivated to combine Sullivan and Ise.

CONCLUSION

It is believed that no fee is required for this submission. If any fees are required or if an
overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No.
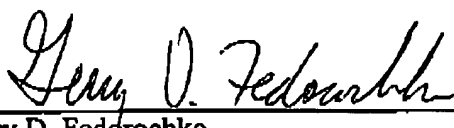19-0733, accordingly.

All rejections having been addressed, applicants respectfully submit that the instant
application is in condition for allowance, and respectfully solicit prompt notification of the same.

Respectfully submitted,

BANNER & WITCOFF, LTD.

Dated: May 13, 2004   By: _____
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